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(22) Petition party: November 14,1 991

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(54) Name of Invention: Rotating slot style gaming device

Object:

The object of this invention is related to a brand new rotating style slot game feature and designed to allow players to select symbol distribution on their own when they for a bigger thrill. Every time coins are inserted players will have a chance to formulate the condition to step up pay distribution on a monitor screen. Players can decide whether they will play a game under this condition and pull a slot handle to turn rotating slot turntable that has various winning and losing symbols displayed circularly in circumference. The pay distribution will be made based on winning symbols and condition selected previously.

Structure:

The device includes a step-up formulation method to display cards that step up winning symbol distribution among various symbols displayed on a turntable circumference for the numbers of coins inserted and turn on and off a turntable, the slot handle mechanism which control numbers of turns, the feature to detect the kind of distribution symbols and make distribution when detection signals are received, and computer which controls all these features.

Scope of requested patent:

Requested item 1:

Step-up formulation method to display cards that step up winning symbol distribution among various symbols displayed on turn table circumference for the numbers of coins inserted and turn on and off a turntable, slot handle mechanism which control numbers of turns, the feature to detect the kind of distribution symbols and make distribution when detection signals are received, and computer that controls all these features.

Detailed description of invention:

0001 - Utility field in industry:

This invention is related to a brand new rotating slot style gaming device that includes the condition formulation method to step up symbol distribution by striking coins on monitor display and s rotating slot turntable which has display of various winning and losing symbols displayed circularly on circumference.

0002 - Conventional technology:

In the past, a slot machine that has three individually rotated drums with various symbols displayed in outer edge placed on one axis is widely known. Three rotating drums turn and stop randomly. Pay distribution is made based on the combination of the certain three symbols.

0003:

Also, a roulette style gaming device that pays the numbers of coins shown on the symbol that a ball stopped on a turntable with various symbols displayed on premeters is public knowledge.

0004 - Subject that an inventor attempts to resolve:

However, above technology does not allow players to step up the symbols so that the thrill of playing is minimum and players have lost interest.

0005 - Method to revolve the problems:

The object of this invention is to revolve the above problems. Characteristics are the step-up formulation method to display cards that step up winning symbol distribution among various symbols displayed on a turntable circumference for the numbers of coins inserted and turn on and off a turntable, the slot handle mechanism which control numbers of turns, the feature to detect the kind of distribution symbols and make distribution when detection signals are received, and computer which controls all these features.

0006 - Practical examples:

Next is the detailed explanation of one of the practical example of this invention.

1. Base with computer
2. Round slot game plate placed vertically on the base
3. Turn table placed on round slot game plate with 36 symbols displayed circularly (4 + 5).
4. Various winning symbols on circumference.
5. Losing symbols.
6. Coin entry
7. Button for 10 cards
8. Button for 5 cards
9. Button for 3 cards
10. Button for 1 card which decides the number of card bet.
11. Monitor display which displays pay multiplication condition or step-up condition from various winning mark based on a winning card.
12. Slot handle a player will pull when he/she has decided the condition from monitor display.

0007:

Base (1) includes 6, 10, 9, 8, 7, card display area, 11, and 12.

0008:

There are the following cards.

1. Red card:

   Step-up card that will increase 7 and BAR pays. (1 step increase 7 pay by 10 points and Bar pay by 5 points. The maximum pay for 7 is 1,000 and Bar is 500 points.)

2. Yellow card:

   Step-up card that will increase Bell and Plum pays. (1 step will increase Bell by 4 points and Plum by 3 points. The maximum pay for Bell is 400 points and Plub is 300 points)

3. Green card:

   Step-up card that will increase Orange and Cherry pays. (1 step will increase Orange by 2 points and Cherry by 1 point. The maximum for Orange is 200 points, and Cherry is 100 points.)

4. Trumpet card:

   A card that will increase above pay for up to 4 times. (3 cards pulled - twice increase, additional three cards pulled - 3 times, another additional 3 cards pulled - 4 times)

5. Red *(star) card:

   One card pulled will increase Red * pay by one point. (Maximum 99 points)

6. Blue *(star) card:

   One card pulled will increase Blue * pay by one point. (Maximum 99 points)

7. B. C card:

   Normally win will be effective only on A spots, but when four B cards are pulled additional points will be applied on B spots, and four C cards pulled will apply additional points on C spots.

8. Crown 7 card:

   Two cards pulled will create a right for jackpot. A right for jackpot means the right to win jackpot when a player turns turntable and 7 stops on either A, B, or C spots.

9. Jackpot point card:

   Card that will increase point that could be won by right for jackpot. (Cards can pulled up to maximum 15,000 points)

10. Bunny girl card:

Card with no condition change.

0009:

When a coin is inserted into coin entry (6) credit number that will coincide with a numbers of coins inserted will be displayed on monitor display (11).

0010 - The distribution of cards:

- Computer possesses six types of card case with different numbers of cards.
- Each game computer selects which card case cards are selected from.
- In addition, the sequence of cards in card case is different each time.
- Cards selected by a player will be displayed on a monitor screen, and the result will be shown on certain area on Picture #1 or lights.
- Multiplier and A, B, and C spots on Picture #2 will be lit. Normally, it only apply on A, but when B or C cards are pulled one arrow will be lit. In addition, when B or C cards are pulled the arrow light will move toward B or C spots one at a time. When four of B or C cards are pulled the multiplier will apply on B or C spots. When one trumpet card is pulled A lamp will be lit. When another trumpet card is pulled the light will move toward x4. When the light is on x2, x3, or x4 lamp respective multiplication will apply.

0011 - Turntable mechanism:

14. Shaft pins
15. Sensor ring board
16. Incisions
17. Motor coppler
18. Direct current motor (Direction of turn can be changed by changing direct current amount.
19. Sensor unit
20. Six Hikari sensor
21. Solenoid
22. Roller
23. Rod
24. On/Off switch
25. Cards

As shown on Picture #4 and #5 there are 36 shaft pins (14) on every 10 ° on radius on the back of a turntable (3), and a sensor ring board (15) with over dozen incisions (16) on an axis are installed. Also, there are a monitor coppler (17), turning direction of the direct current motor can be changed by the amount of direct current applied (18), and a sensor unit, and six Hikari sensor (20). Sensor ring board (15) is located strategically to turn through six Hikari sensors. Hikari sensors (20) will be off when there are obstacles on the black area created by Hikari switch, and it will be off when there aren't any obstacles. Through this mechanism one symbol out of 36 symbols will be detected.

0012:

Therefore, incisions on the sensor ring board (15) are located in 16 locations to detect 36 marks on diameter.

0013:

Solenoid (21) will be on when the turntable (3) turns, and the rod(23) with the roller (22) attached will be on top. When the turntable stops the solenoid is off and the roller will be at the bottom. The roller is left to be turned with a hand so that it stops between two adjacent shaft pins (14).

0014:

But, when the roller (22) stops directly on top of the shaft pin (14) the direct current motor (18) will turn until the on/off switch (24) will be turned off. (Until the roller (22) stops between two adjacent shaft pins (14)).

0015 - Slot handle mechanism:

When the slot handle (12) is pulled 12V direct current will be applied to direct the current motor (18), and a turntable (3) will turn at the speed of one turn per minute. At the same time, the rod (23) on the solenoid (21) will be moved up and the roller (22) will move up simultaneously. The turntable (3) will turn at least for two seconds after the slot handle(12) is pulled. When the slot handle (12) is returned after two seconds direct current on a direct current motor (18) will be reduced to approximately 3V, and the turning will be reduced to 1/6 turn per minute. The turntable (3) will stop automatically five seconds after the slot handle (12) is returned.

0016:

When the slot handle pull is continued turntable (3) movement will be defaulted to the same movement with the handle (12) being returned. At the same time the solenoid (21) will be turned off and the roller (22) will be dropped. When the on/off switch (24) detects the roller (22) being dropped between two adjacent shaft pins (14) a signal will be sent to the computer in the base unit. When computer confirms this information it will read the signal sent from the sensor unit (19) and find out winning or losing symbols. When a winning symbol is detected the device will make the pay distribution based on the step-up condition displayed on the monitor screen and one game will be completed.

0017:

The game will be played by inserting coins, selecting cards by pressing card bet buttons (7 - 10). Cards (25) computer selected will be displayed on the monitor screen (11). Pay multiplier on symbols or step-up condition will be increased on the monitor screen (11) according to these cards. When a player decided to start a game based on good odds and/or conditions he/she will pull the slot handle (12). The turntable (3) starts to turn. After two seconds return the slot handle (12) and reduce the turntable (3) speed and control turn to stop certain symbols to stop on A, B, or C spots. After five seconds when the direct current motor (18) turning speed is 0 the roller (22) will be dropped between two adjacent shaft pins (14) on the back of the turntable that is turning very slowly.

0018:

Sometimes the roller (22) jumps adjacent shaft pin (14) and stops in between pins that are not adjacent, and it will increase the excitement. When the roller (22) drops completely the on/off switch (24) detects this and send a signal to the computer. When this information is input into the computer it will read a signal from the sensor unit (19) on A, B, or C and for a winning symbol the pay distribution will be made according to the winning distributions displayed on the monitor screen. This will complete one game.

0019 - Effect of invention:

Computer has the following features.

- Step-up formation method (feature) that will display various cards that will allow step up of winning symbols from various symbols marked on circumference of turntable for the numbers of coins inserted into the machine.
- Slot handle feature that turns on or off the turntable.
- Feature that detects pay symbol kinds and the step-up condition and receives a detection signal to make the pay
- Feature to execute above features

This will allow a player to formulate the step-up condition on a winning symbol on the turntable and decide whether to play a game or not under this condition. If he/she decides to play he/she will start a game by turning a turntable by pulling a slot handle and control speed of a turntable turn by pulling of a slot handle. The stop position can be controlled to a certain degree by a player, so this feature adds more excitement and thrill that can not be experienced with conventional games.

Description of pictures:

Picture 1:	Practical picture of this invention
Picture 2:	Round slot plate from the front

Picture 3:	Base with computer
Picture 4:	Round slot game plate placed vertically on the base
Picture 5:	Explanation of turntable, solenoid, roller and on/off switch movement
Picture 6:	Sensor unit to detect turning position of turntable

Description of numbered parts:

1. Base
2. Round slot plate
3. Turntable
4. Winning symbols
5. Losing symbols
6. Coin entry
7. Buttons
8. Buttons
9. Buttons
10. Buttons
11. Monitor screen
12. Slot handle

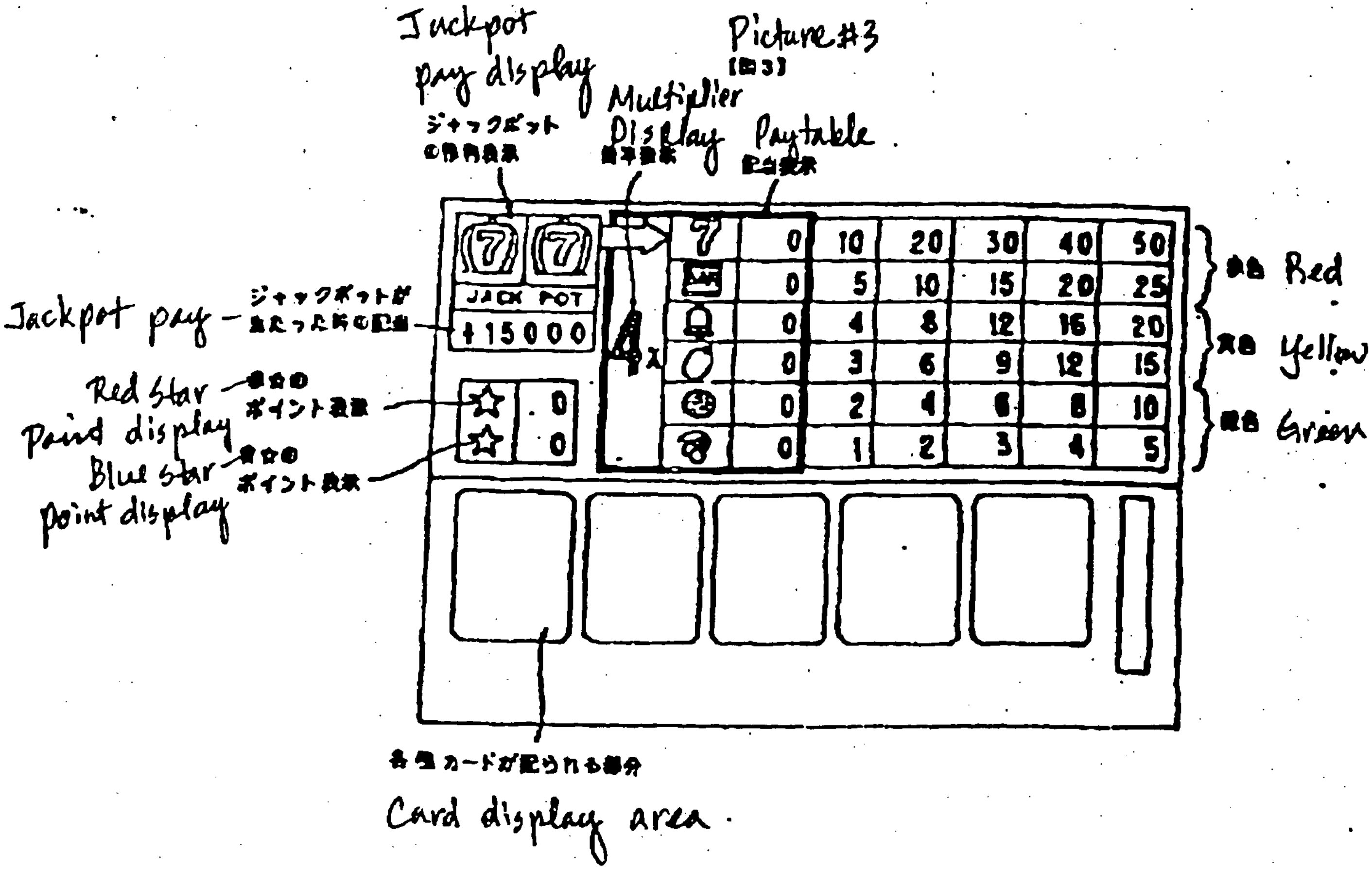
13 is missing on original. >

14. Shaft pins
15. Sensor ring board
16. Incisions
17. Motor coppler
18. Direct current motor (Direction of turn can be changed by changing direct current amount.
19. Sensor unit
20. Hikari sensors
21. Solenoid
22. Roller
23. Rod
24. On/Off switch
25. Various cards

Translation by Taz Adams
December 13, 1996

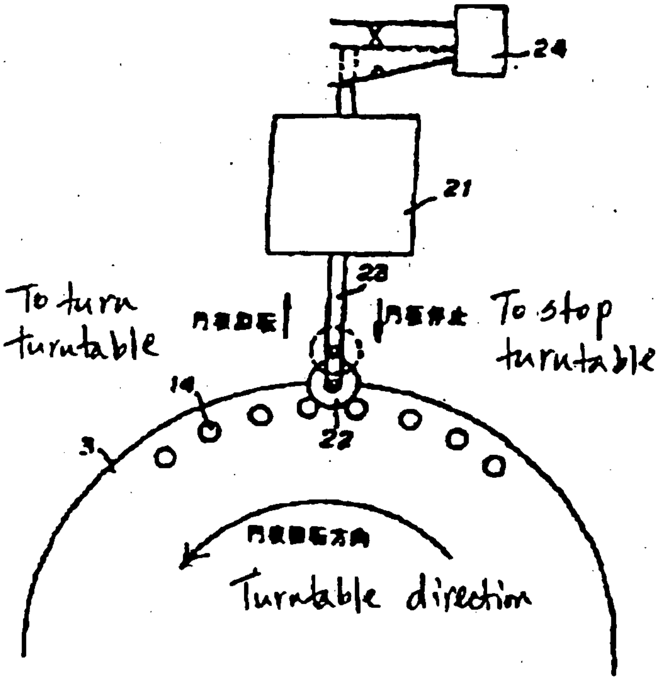
Picture#3

【図3】


Jackpot pay display
ジャックポットの配当表示
Multiplier Display
倍率表示
Paytable
配当表示
Jackpot pay
ジャックポットが当たった時の配当
JACK POT
15000
Red Star Point display
赤☆の ポイント表示
Blue star point display
青☆の ポイント表示
0
0
4
0 10 20 30 40 50
0 5 10 15 20 25
0 4 8 12 16 20
0 3 6 9 12 15
0 2 4 6 8 10
0 1 2 3 4 5
赤色 Red
黄色 Yellow
緑色 Green
各種カードが配られる部分
Card display area

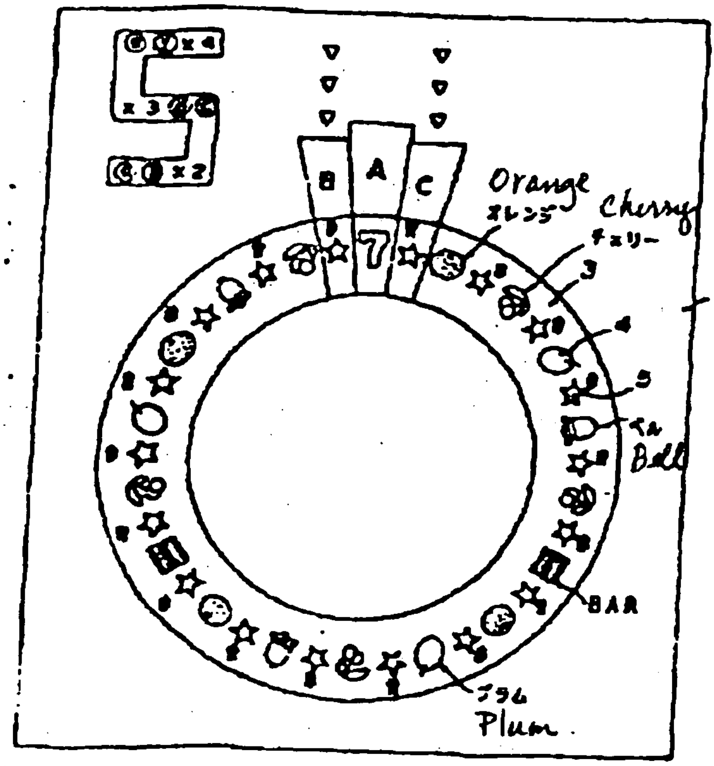
Picture #5

【図5】


24
21
23
To turn turntable
円盤回転
円盤停止
To stop turntable
14
3
22
円盤回転方向
Turntable direction

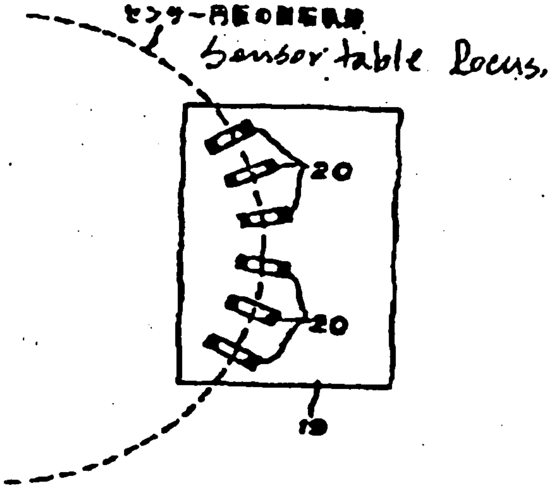
Picture #2

【図2】


Multiplier
×4
×3
×2
B
A
C
7
Orange
オレンジ
Cherry
チェリー
3
2
4
5
ベル
Bell
BAR
プラム
Plum

Picture #6

【図6】


センサー円板の回転軌跡
Sensor table locus.
20
20
19

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